

Method and Apparatus for Skills-Based Task Routing

An efficient algorithm is presented for selecting an agent to service a task in a skills-based routing system. A set X is determined of all states of the boolean variables that contain the required skills for a task. A resume table of available agents is built, organized by the states of the N variables; each agent is represented in each state that includes all skills possessed by the agent. All available and qualified agents are determined from the resume table; those agents associated with a state of the resume table outside of the set X are disqualified. An agent is selected from those remaining. Preferably, an agent is selected having a minimum qualification level to service the task. One preferred way of doing this is to subtract from the number of terms in a canonical form of the required skills expression a number equal to the number of times the agent appears in the set of states X and picking an agent with the lowest result. In the preferred embodiment, however, proficiency levels of each required skill are taken into account in making the final selection.